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ABSTRACT

Some of the merits and limitations of Competency Based Teacher Education (CBTE) programs are reviewed, and a model CBTE program is presented. The model CBTE program is the primary concern of this discussion; however, arguments are mentioned for and against other such programs to give perspective to the components chosen for inclusion in the model program. Based upon current evidence, it seems that a major weakness of many CBTE programs may be that they seek to establish a singular, univariate examination of teacher performance and an isolated, oversimplified explanation of the learning situation. The model CBTE program, therefore, is developed so that the interaction of a number of variables which influence the teaching/learning situation can be observed. It takes into account the facts that teaching performance is a complex of knowledge and teaching skills extending over a long period of time and that teaching performance can only be adequately and effectively assessed by multiple and multileveled observations over an extended period. Presented here, the Multiple Measure Model of Teacher Performance is an attempt to measure the same goal or objective by different techniques and under varying circumstances. The multiple measure approach utilizes various learning objectives (cognitive, performance, consequence, affective, and exploratory), and the criteria for performance can be derived from these objectives. In addition, the approach allows for the assessment of a single objective in two dimensions--the learning condition and the learner response. (MM)

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A Model for a Competency Based Teacher Preparation Program

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Competency based pre- and in-service teacher preparation programs have become firmly implanted in the thinking of educators. Two sources alone (ACTE, 1972; Houston, 1973) attest to the fact that there is a plethora of materials about these programs as well as no dearth of resources for providing content for training programs.

A quick review of the literature reveals that the proponents and critics of competency-based teacher education (CBTE) programs are engaged in attempts to set limits to the field of their programs. However, it soon becomes evident to the reviewer that often the educational decision to be made is not whether CBTE programs should be instituted nor the manner in which they are to be instituted, but mainly what shall be the content of these programs. In many states, the first two decisions have been arrived at politically, and educators are legally obligated to begin new teacher preparation programs as CBTE programs and to change all existing programs that are not presently competency-based by some specified date.

One state makes the following convictions (New York, 1972):

> Pupil performance should be the underlying basis for judging teacher competence.
>
> The basis for certification itself should be teacher competence, not merely the completion of college courses. Possession of a state certificate should represent an acceptable level of teacher competency in the performance of teaching duties.
>
> The preparation of teachers should involve a number of pertinent agencies and individuals, including schools, higher institutions, professional staffs, and relevant agencies.
>
> Like other professions, teaching requires that professional personnel undergo continuous training; consequently, teachers should be expected to demonstrate competency periodically to maintain certification.

The purpose of this paper is to review some merits and limitations of CBTE programs and to present a model which may be used to work effectively within the theory of CBTE.

Competency-Based Teacher Education

Two terms are used interchangeable in the literature -- "competency" and "performance." For the purpose of this paper, a competency will mean an

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ability, talent or skill. It is that which allows someone to do something. A performance is a formal, observable exhibition of a skill, talent or ability. A competency may be demonstrated through the performance of a particular task or a series of tasks.

Competency-based instruction has the following central characteristics (Houston and Howsam, 1972):

1. Specification of learner objectives in behavioral terms
2. Specification of the means for determining whether performance meets the indicated criterion levels
3. Provision for one or more modes of instruction pertinent to the objectives
4. Public sharing of the objectives, criteria, means of assessment, and alternative activities
5. Assessment of the learning experience in terms of competency criteria
6. Placement on the learner of the accountability for meeting the criteria

Since this paper is concerned primarily with one way of implementing a CBTE program, the arguments mentioned for and against such programs are not exhaustive. These are presented only to realize what aspects of the program are appropriate for the model being presented. Educators advocating CBTE indicate that the programs are one answer to the problem of identifying the effective teacher (McNeil, 1972), and that the programs can reflect what teachers actually do and what research suggests they might or should do (Houston and Howsam, 1972). In addition, it is felt that CBTE places the burden of professional preparation on those most responsible for it, and that it requires evaluation based on pupil behavior rather than on teacher behavior (Houston, 1973). The most promising advantages of CBTE are its attention to individual abilities and needs; its focus on objectives; its emphasis upon the sharing process by which these objectives are formulated and used as the basis of evaluation; its efficiency, enhanced by the use of feedback; and its student and program accountability features (Elam, 1972).

The most comprehensive analysis and critique of CBTE is that by Broudy (1972). He states that teaching is more than the sum of discreet performances. It is a "pattern" which can only be analyzed by its parts after the pattern has been understood. He indicates that "performance" is a vague term with no wide agreement as to what constitutes performances nor what performances to be concerned with. He believes that this leads to the possibility of different teachers being prepared with and for different "task sets." Broudy goes on to state that

> Teaching-learning can be viewed from any one or more of an indefinite, number of aspects; there is no theoretically plausible way of precluding any one of these aspects or limiting the total number of them, because learning can be in any domain and about any subject in any human situation.

Broudy (1973) also discusses the difference between "operational" and "preparational" competence. The former is the actual doing, the latter, the supposed doing. If theory is stressed, training becomes basically preparational. He states that the difficulty with the overt performance criteria is that a correct performance does not clearly reveal underlying rationale. The argument then becomes one of trying to determine whether teacher trainers are preparing technicians or professionals, for if the correct performance of a task is the sole criterion for competence, then the study of theory is unnecessary. A teacher trained as a technician does not need to know why something works, only that it does.

McDonald (in Stokes, 1973) feels that performances are operational definitions of competencies, that they are not empirically derived, and that there are no established and predictable connections between specific teacher performances and student achievement. He views teaching as a global activity. Teacher behavior is meaningful primarily in terms of the total context of complex interactions and qualities including the personality of the teacher, and the social cultural milieu of the teaching situation. He makes the analogy that teaching is more like speaking than operating a machine.

Wanat, in response to McNeil (1972), questions the representativeness of performance tests and questions whether they allow for potential as diagnostic tools. He would not like CBTE measures to become accusatory and punitive.

Moburg (1972) raises issue with the time span of CBTE programs. If the program is of short duration, it does not seem reasonable to him to expect immediate application of all new ideas and concepts by the teachers. Also, when new concepts and techniques are applied in the classroom, the transfer to growth in student learning will take even more time.

In addition, Moburg questions the validity of using norm-based instruments for measuring short term change and whether they are adequate for assessing student progress toward all of the goals of a teacher training program.

Sherwin (1973) believes that to link teacher accountability to pupil performance is to hold teachers accountable for society's failure to cope with the largest and most difficult problems in society today.

Stokes (1973) indicates that CBTE's most serious problem is that they have been implemented without there having been developed a sound theoretical base nor do they have a responsiveness to differentiated teaching styles.

This writer raises the question as to whether or not it is appropriate to assess a teacher's competency by an assessment of a pupil's progress in a developmental task such as language learning. Reading in the elementary and secondary schools is a process not a subject area, and as such, it does not have a body of knowledge or content. Reading, as a language process, entails the complex application of a large number of interrelated skills which are not always conscious.

In another place (Hittleman, 1973), this writer, after reviewing and synthesizing research related to readability (what most people call the "act of reading"), concluded that any definition of readability must take into account how the interrelationship among the characteristics of the reader, author, and topic all affect readability. Readability, it is

suggested, might be a comprehensive term for a conglomerate of capacities, processes, and interactions within, between, and among the author, the passage content, the written product and the reader.

This view seems to be supported by Bormuth (1973) in his discussion of a definition of literacy. He states that

> What we are forced to observe in assessing literacy is not the processes that we really want to observe but merely objects and overt behaviors that we take as being signs of the presence or absence of the processes that in fact determine whether or not a person is literate.

It seems unfair, then, to judge a teacher-in-training solely by pupil growth in an area for which we do not have reliable growth standards.

Conditions Leading to Effective Teaching

Some of the critics of CBTE programs may be correct in that no one has substantially validated performance tests of teaching proficiency. For example, Popham (1971) reported the results of three validation replications which failed to confirm his prediction that experienced teachers would promote significantly better achievements of given instructional objectives than would non-teachers. He concluded that experienced teachers were not particularly skilled at bringing about prespecified behavior changes in learners. He stated that there was no reason to believe teachers are skilled goal achievers because they have not been trained to be.

Obviously, as many teachers, students, parents and administrators will attest, a difference does exist among teachers' performances, and some teachers are better than others. But do we know what classroom behaviors make these teachers appear to be better than some of their colleagues?

Rutherford (1971) summarized some research findings about the classroom behaviors of effective teachers. The behaviors seem to reflect

> A willingness to be flexible,
> An ability to perceive the world from the students' view,
> An ability to personalize their teaching,
> A willingness to experiment, to try new things,
> A skill in asking questions,
> A knowledge of their subject matter,
> An established examination procedure,
> Some provision for study helps,
> An appreciative attitude, and
> The use of a conversational manner in class.

This seems to be supported by Randhawa and Fu's (1973) conclusion that the classroom learning environment is an interaction phenomenon and that it is important to get the developmental history of each member of the group on such variables as personality, cognition, social-economic-status, sex, as well as the subject matter being taught and learned.

Cohn (1972) concludes that the factors at work in the classroom affecting teacher student interaction are

> The organization of the teaching instructional activities,
> The participation rates of the students,
> The classroom status systems, and
> The teacher's use of authority.

Based upon current evidence, it seems that a major weakness of many CBTE programs may be that they seek to establish a singular, univariate examination of teacher performance and an isolated, over simplified explanation of the learning situation. As indicated by the critics of CBTE programs, teaching and learning do not occur in a vaccuum, but are influenced by, and in turn influence, teacher characteristics, learner characteristics, environmental conditions and the subject matter. CBTE programs, therefore, need to be developed so that the interaction of a number of variables which influence the teaching/learning situation can be observed. The teacher trainer must also remember that teaching performance is a complex of knowledge and teaching skills extending over a long period of time. Teaching performances, then, can only be adequately and effectively assessed by multiple and multileveled observations over an extended period.

Multiple Measure Model of Teacher Performance

In an attempt to provide a practical model that can be utilized by teacher trainers in reading, a few things should be stated. First, a model is a classification system which attempts to categorize behaviors. Even through the model should be built on a viable and supportable theoretical base, it still is an artifact and its usefulness depends upon the clarity with which it categorizes behaviors. Second, there is no agreement among educators as to the nature of "competence" nor upon performances which might constitute competence. Third, a model will not identify the goals and objectives of a CBTE program; it will only allow for the identification of relationships among and between these objectives. Fourth, models should not be conceived as static or absolute. Models are useful in decision making; however, they must be continuously modified, or even discarded, as new evidence provides further explanations and clarifications of the nature of the reading process and the nature of the teacher/learner interaction.

The Multiple Measure Model of Teacher Competence is a straight-forward attempt to measure the same goal or objective by different techniques and under varying circumstances. As indicated by Popham (1972):

> By gathering more than one indication of the learner's status, the educational decision-maker is advantaged in that he can weigh the merits of several indices which albeit less than perfect, will in combination yield a better picture than will any single criterion.

As a note of caution, one should not confuse "multiple measure" with multiple objectives. The latter involves a number of discrete objectives which are used to assess a global dimension, for example, "appreciation of literature." The multiple measures approach allows for the assessment of a single objective in two dimensions - the learning condition and the learner response. (See Figure 1.)

Figure 1

Multiple Measure Model of Teacher Performance

Responses	Conditions: Manipulated	Conditions: Natural
Product	theoretical information	lesson and material preparation
Behavior	controlled or pre-set teaching conditions	actual classroom teaching

For each of the two dimensions in the multiple measure model, there are two levels. Under the "learning condition," two situations are established -- "manipulated" and "natural." The manipulated condition involves situations such as classroom recitations, role playing, micro-teaching, supervised or demonstration clinic teaching and paper and pencil examinations. The natural condition involves "on the job" observation usually in a school setting.

Under the "learner response," two types of responses are expected -- "product" and "behavior." The product response involves the making, creating, or writing of projects, instructional materials and answers to written or oral examinations. Within the product response realm, the learner generally is concerned with cognitive objectives. The behavior response involves a performance. The learner demonstrates an ability to utilize knowledge in one of the learning situations -- manipulated or natural.

The multiple measures model allows the teacher trainer to differentiate between the "operational" and "preparational" competencies referred to above by Broudy. It also allows the teacher trainer to effectively choose learning objectives to fit the nature of the competency required, the available assessment means, and other situational factors.

In the process of using the multiple measure model, various learning objectives can be utilized (Houston and Howsam, 1972) and the criteria for performance are derived from these objectives:

Cognitive objectives specify knowledge and intellectual abilities or skills that are to be demonstrated by the learner, that is, the teacher in training.

Performance objectives require the learner to demonstrate an ability actually to perform some activity.

Consequence objectives are expressed in terms of the results of the learner's actions; that is, in terms of the accomplishments of the students under the direction of the teacher in training.

Affective objectives deal with the realm of attitudes, values, beliefs, and relationships.

Exploratory objectives (also called experience or expressive objectives) do not fit fully within the category of behavioral objectives because they lack a definition of desired outcomes. These objectives specify activities that hold promise for significant learning; they require the learner to experience the specified activity.

The matrix of the model is completed by selecting activities and/or tasks which will allow for observed responses in one of the four measurement conditions. The activities should, obviously, be appropriate to a general objective which is consistent within the total CBTE program. For example, a general objective might be one of the following:

The teacher in training can give the rationale for, construct, administer, score and interpret the results of an informal reading inventory.

The teacher in training can give the rationale for, construct, and instruct with a directed reading lesson.

The teacher in training can develop a series of lessons, select appropriate materials, or create materials, and carry out the lessons designed to develop in pupils the strategies for the reading of special materials, graphs, and maps.

Suggested activities for the above general objective concerned with the use of an informal reading inventory (IRI) might be:

For a "manipulated product" task, the teacher-in-training might be asked to explain or recount the historical development of IRI's, the limitations of IRI's, the effective use of IRI's, the criteria for establishing performance levels through the use of IRI's, and the types of interpretations that can be applied to classroom use of the IRI's. This information can be obtained through oral or written examinations.

For a "manipulated behavior" task, the teacher-in-training might be asked to diagnose "set" cases which the instructor has developed. These cases can be presented in written form, or on audio and video tape recordings, and accomplished in seminar situations or in individual learning laboratory settings.

For a "natural product" task, the teacher-in-training might be asked to construct an acceptable IRI.

For a "natural behavior" task, the teacher-in-training might be asked to select a student, then administer, score and interpret the results of an IRI in a school setting. When this is impractical, a student who has been referred to a college reading center may be used.

No one task or performance situation alone is used to totally assess a teacher-in-training's competency in attaining the general training objective. The college instructor or school supervisor assesses the teacher's performance in a variety of situations before the teacher is deemed competent.

This writer has intentionally omitted any reference to the "criterion" of "success" or "mastery." Not only is there a lack of agreement among educators about "competence" and "performance," there is no agreement at all about what constitutes mastery or even an "acceptable" performance. These decisions are left to the individual teacher trainer or training institution. Yet another word of caution is warranted. A survey of in-service training programs in reading (Moburg, 1972) led to the conclusion that the most complete methods of evaluating teacher improvement involved *both* (stress added) self reports by the teachers and observations of the teachers by one or more specialists.

Ultimately, the objective of CBTE programs is the pupil learning and accomplishments under the direction of the teacher in training (consequence objectives). All CBTE programs contain some provision for this so-called accountability aspect. The multiple measure model provides the opportunity for the teacher's effectiveness to be measured under two learning conditions. Here again, each training situation may suggest or require different standards for judging the teachers' effectiveness. The question of how much learning should occur in the pupils can only be considered in direct relation to the purpose of the teaching-learning task, the characteristics of the learner, the social-cultural setting, and the nature of the subject material being learned.

Affective Goals

Even with a striving for setting learning conditions for observing teachers' competency, it should not be forgotten that exploratory objectives cannot be evaluated in the usual fashion of direct observation. Assessment can be made only in terms of whether the learner actually undertook the activity (Houston and Howsam, 1972). The teacher trainer, then, must establish a series of activities or tasks which will expose the learner (the teacher-in-training) to situations within which attitudes and beliefs can develop or undergo change. It is when CBTE programs are concerned solely with the directly observable and measureable that they allow themselves to be criticized as being "anti-humanistic."

The multiple measure model can assist teacher trainers in developing activities for affective objectives such as:

> The teacher in training will understand the development of divergent dialects and appreciate their value as communication systems.

Conclusion

This paper has been an attempt to present a viable means for constructing competency based teacher education programs in such a way that their strengths can be utilized and some of their weakness overcome. Whether CBTE programs will be utilized effectively will depend upon the understanding that educators

have about their potential and limits, and the willingness of teacher trainers to be accountable for their own competence. Political decisions are constantly altering educational practices; however, educators should not abdicate their responsibility for providing enlightened, practical leadership in the implementation of vague policy.

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